



UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/082,328	06/24/93	KNIGHT	7828003

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MM51/0505

EXAMINER
SPARKS, D

ART UNIT	PAPER NUMBER
2835	23

DATE MAILED: 05/05/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/082,328

Applicant(s)

Knight et al.

Examiner

Donald A. Sparks

Group Art Unit

2835



☒ Responsive to communication(s) filed on Feb 25, 1998

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-28, 30-79, 102-200, and 203-209 is/are pending in the application.

Of the above, claim(s) 2-27, 30-36, 49-51, 60-79, 103-142, 145, 148-200, and 21 is/are withdrawn from consideration.

☒ Claim(s) 44 and 59 is/are allowed.

☒ Claim(s) 1, 28, 37-43, 45-48, 52-58, 102, 143, 144, 146, and 147 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

The examiner acknowledges the applicant's submission of the amendment dated February 25, 1998 wherein the applicant amended claims 1, 28, 44, 59 and 102. Thus, claims 1-28, 30-79, 102-200 and 203-209 are pending in the instant application.

1. INFORMATION CONCERNING DRAWINGS

Drawings

As required by M.P.E.P. § 707.07 and M.P.E.P. § 707.07(e), the examiner reminds the applicant's of the necessary drawing corrections required by the draftsman indicated on the PTOL-948 which accompanied the office action dated March 7, 1996.

2. RESPONSE TO THE APPLICANT'S ELECTION

The examiner reminds the Applicant's of their election with traverse of Species VII involving figures 10-12B in Paper No. 21 dated May 23, 1997. Thus, claims 2-28, 30-36, 49-51, 60-79, 103-142, 145, 148-200 and 203-209 remain withdrawn from further consideration by the examiner and claims 1, 28, 37-48, 52-59, 102, 143, 144, 146 and 147 are ready for reconsideration by the examiner.

:IMPORTANT NOTE:

This application contains claims 2-28, 30-36, 49-51, 60-79, 103-142, 145, 148-200 and 203-209 drawn to an invention non-elected with traverse in Paper No. 21 dated May 23, 1997. A

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complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) MPEP § 821.01.

3. REJECTIONS BASED ON PRIOR ART

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

-- Claims 1 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,103,283 awarded to Hite.

The “substrate” is represented by element 2. The “chip” is represented by element 10.

The “means for powering the chip” is represented by the inherent external structure connected to element 4 to provide power to the chip. The “means for capacitively signalling between the chip and the substrate” is represented by element 34 or 36. The “signal leads connected on the substrate and the chip” are represented by elements 38 and 40.

-- Claims 1 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 4,982,311 awarded to Dehaine et al.

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The “substrate” is represented by element 16. The “chip” is represented by element 12. The “means for powering the chip” is represented by element 15. The “means for capacitively signalling between the chip and the substrate” is represented by element 19. The “signal leads connected on the substrate and the chip” are represented by elements 18b and 38.

-- Claims 1 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 4,982,311 awarded to Japanese ref.(63-15435).

The “substrate” is represented by element 1. The “chip” is represented by element 5. The “means for powering the chip” is represented by at least one of the elements 3. The “means for capacitively signalling between the chip and the substrate” is represented by element 7. The “signal leads connected on the substrate and the chip” are represented by the traces on the substrate which connect to element 7' and the bonding pad on the active surface of the chip.

-- Claims 1, 28, 37-39, 41-43, 47, 52-58, 102, 143, 144, 146 and 147 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Pat. No. 5,404,265 awarded to Moresco et al.

The “substrate” is represented by element 20. The “chip” is represented by element 10. The “means for powering the chip” must inherently exist and is represented by what ever power supply system that is connected to element 20 to provide power to the chip (10). The “means for capacitively signalling between the chip and the substrate” is represented by the combination of elements 30', 40' and 50' where element 30' and 40' respresent the first and second half capacitors. The “signal leads connected on the substrate and the chip” is

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represented by the traces on the substrate which connect to element 40' and the bonding pad on the active surface of the chip which is below element 30'.

:IMPORTANT NOTE:

The 5,404,265 reference is a U.S. patent awarded to Moresco et al. that claims the rejected invention. An affidavit or declaration is inappropriate under **37 CFR 1.131(a)** when the patent is claiming the same patentable invention, see **MPEP § 2306**. The patent can only be overcome by establishing priority of invention through interference proceedings. See **MPEP Chapter 2300** for information on initiating interference proceedings.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

-- Claims 40, 45, 46 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,404,265 awarded to Moresco et al.

Claims 40, 45, 46 and 48 define over the structure of Moresco et al. (5,404,265) by the requirement that **portions of the chip are passivated and securely fastened together**. It is an expedient in the art to provide a **passivation layer on the bottom surface of the chip adjacent**

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to elements 30 for the purpose of limiting the flow of solder and preventing the contacts from shorting together during the bonding process. Furthermore, to use an adhesive material for the dielectric would also have been within the skill of a practitioner in the art in an effort to prevent the half capacitor from separating from one another.

4. ACKNOWLEDGMENT OF ISSUES RAISED BY THE APPLICANT

Response to Amendment

Applicant's arguments filed February 25, 1998 have been fully considered but they are not deemed to be persuasive and, as required by M.P.E.P. § 707.07(f), a response to these arguments appears below.

a. ARGUMENTS CONCERNING FORMAL MATTERS

The applicant's traversal of the formal requirements requested by the examiner are addressed in the following section as required by M.P.E.P. § 707.07(f).

:IMPORTANT NOTE:

As this action constitutes a final rejection, applicant's response must either comply with all formal requirements or specifically traverse each requirement not complied with. The examiner further draws the applicant's attention to 37

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C.F.R. § 1.113 and 37 C.F.R. § 1.116 regarding the submission of after-final responses and amendments.

b. ARGUMENTS CONCERNING PRIOR ART REJECTIONS

1st POINT OF ARGUMENT:

Regarding the applicant's traversal of the rejection of claims 1, 28, 37-39, 41-43, 47, 52-58, 102, 143, 144, 146 and 147 under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Pat. No. 5,404,265 awarded to Moresco et al. based on the applicant's position that there invention is not intended to **reduce fluctuations in the power and ground planes**, the examiner appreciates the applicant's position however, emphasizes that the claims are drafted in such language that there is no restriction in the claims which would prohibit the use of such a structure against the claims. Furthermore, it is unclear how the applicant can allege that it is not an intention of the instant claimed invention to **reduce fluctuations in the power and ground planes** when claims 54 and 55 of the instant claims recite that the **half-capacitors are connected to the ground, power or common of the chip and the substrate**.

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All arguments by the applicant are believed to be covered in the body of the office action or in the above remarks and thus, this action constitutes a complete response to the issues raised in the remarks dated February 25, 1998.

Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See **M.P.E.P. § 706.07(a)**. Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

5. CLOSING COMMENTS

Conclusion

a. STATUS OF CLAIMS IN THE APPLICATION

The following is a summary of the treatment and status of all claims in the application as recommended by **M.P.E.P. § 707.07(i)**:

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a(1) SUBJECT MATTER CONSIDERED ALLOWABLE

Claims 44 and 59 have been allowed.

a(2) CLAIMS NO LONGER IN THE APPLICATION

Claims 29, 80-101, 201 and 202 have been canceled.

a(3) CLAIMS NO LONGER UNDER CONSIDERATION BY EXAMINER

Claims 2-28, 30-36, 49-51, 60-79, 103-142, 145, 148-200 and 203-209 were withdrawn from consideration as a result of the applicant's election dated May 23, 1997.

a(4) CLAIMS REJECTED IN THE APPLICATION

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire **THREE MONTHS** from the date of this action. In the event a first response is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and

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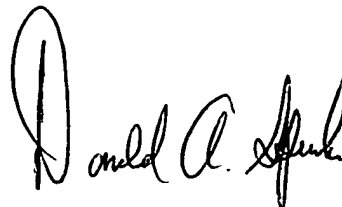
any extension fee pursuant to **37 CFR 1.136(a)** will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than **SIX MONTHS** from the date of this final action.

For at least the above reasons it is the examiner's position that the applicant's claims are not in condition for allowance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald A. Sparks whose telephone number is (703) 308-1756. The examiner can normally be reached on Mon. thru Fri. from 6:30 A.M. to 3:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Leo P. Picard, can be reached on (703) 308-0538. The fax phone number for this Group is (703) 305-3431 or 3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1782.

A handwritten signature in black ink, appearing to read "Donald A. Sparks". The signature is stylized with a large initial "D" and a cursive "A".

Donald A. Sparks
Primary Examiner
Art Unit 2103

May 1, 1998